

ABSTRACT OF THE DISCLOSURE

A method of transferring at least one DNA sequence into cells by transducing the cells, *in vivo* or *ex vivo*, with a modified adenovirus. The adenovirus, prior to modification, is of a first serotype. In the modified adenovirus, at least a portion of the fiber, and in particular the head portion, is removed from the adenovirus of the first serotype and replaced with a portion, in particular the head portion, of the fiber of an adenovirus of a second serotype. Such method is useful in transducing cells which may be refractory to the adenovirus of the first serotype, yet include a receptor which binds to the head portion of the fiber of the adenovirus of the second serotype.